

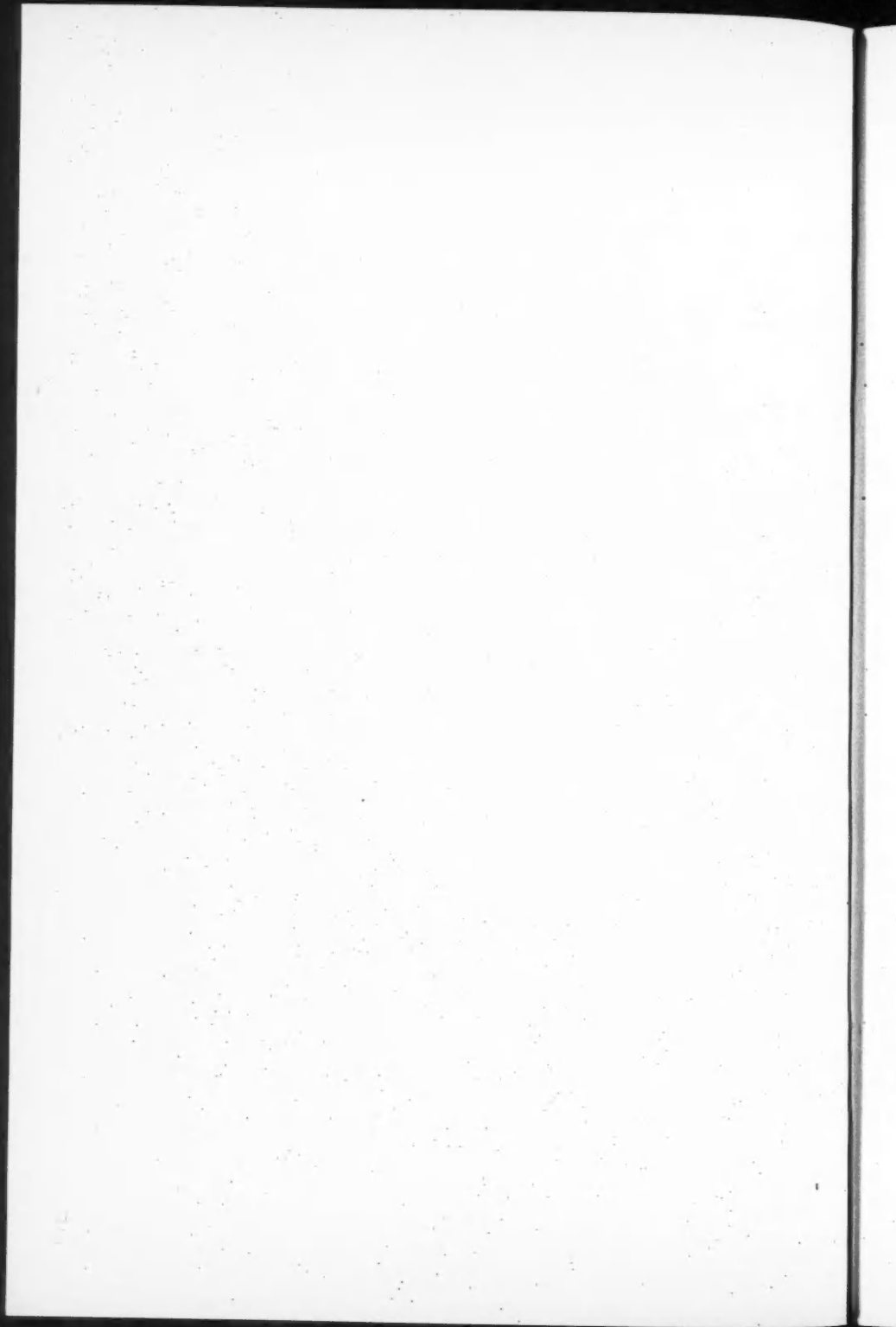
A RMS CONTROL: 1958

by

P. T. Piotrow

	Page
NEW MOVES IN DISARMAMENT STRUGGLE	835
Step-by-Step Approach to Control of Arms	835
Rise of Pressure for Nuclear Testing Ban	836
East-West Differences Over Test Suspension	838
Probing of Problem of Outer Space Control	841
POSTWAR NEGOTIATIONS ON ARMS CONTROL	842
Initial Concentration on Atomic Weapons	842
Linking of Atomic and Conventional Arms	843
Plans for Guarding Against Surprise Attack	844
Differences Over Timing of Successive Steps	845
Inability to Agree on Aerial Inspection Zones	846
TECHNICAL ADVANCES AND ARMS CONTROL	849
Growing Complexity of Control by Inspection	849
Stress on Now-or-Never View of Arms Control	850
Risks in Ban on Nuclear Tests and Nuclear Arms	851

Nov. 7
1958



ARMS CONTROL: 1958

A NEW step-by-step approach to international arms control is currently being tried out at Geneva on two levels. The new method was initiated last summer when nuclear experts met in the Swiss city to explore the technical problems involved in enforcing a ban on testing of atomic and hydrogen weapons. Enforcement having been found a practical possibility, the question was advanced to a second stage with the opening, Oct. 31, of a political conference of the nuclear powers to negotiate an actual ban on test explosions. Now the step-by-step approach is being extended to another aspect of arms control by the convening, Nov. 10, of a first-stage meeting of experts to look into the technicalities of protection against surprise attack.

The first experts' conference, which met from July 1 to Aug. 21, was attended by scientists from eight countries,¹ but only the United States, Great Britain, and the Soviet Union are participating in the present political parley. The new experts' conference, expected to be in session for four or five weeks, has geographical representation from ten countries.²

Breaking up the complex problem of arms control into segments, and subjecting the separate segments to technical, in advance of political, consideration, grew out of the deadlock that paralyzed the United Nations Disarmament Commission when the Soviet Union started to boycott that body a year ago. Although the General Assembly bowed to Soviet wishes and voted, Nov. 4, to put all 81 members of the United Nations on the Disarmament Commission, little hope is held that such a large group can make substantial progress toward international arms limitation. What hope there is for agreement on controls,

¹ *Western countries:* United States, Great Britain, Canada, France; *Eastern countries:* Soviet Union, Czechoslovakia, Poland, Rumania.

² Italy and Albania, in addition to the eight countries which had nuclear experts at the first conference.

Editorial Research Reports

general or particular, still centers mainly on the procedures now being followed at Geneva.

U.N. Secretary General Dag Hammarskjold, commenting on the nuclear experts' meeting in his annual report on Sept. 11, said that the area of conflict had been somewhat reduced "by isolating certain non-political, scientific elements from the politically controversial elements in the total problem of disarmament." Such an approach, Hammarskjold concluded, "might help to improve the atmosphere and clarify many of the problems involved, thus preparing the ground for a time more politically propitious than the present seems to be for a general disarmament agreement." Ambassador Henry Cabot Lodge, U.S. representative at the United Nations, suggested on Oct. 10 that the techniques now being applied in pursuit of a nuclear test ban and protection against surprise attack, might be used also to work out agreements to stop production of nuclear weapons, to limit conventional armed forces and armaments, and to neutralize outer space.

Such further progress depends in large part on success of the current effort to obtain agreement on suspending nuclear tests. Harold E. Stassen, formerly Special Adviser to the President for Disarmament, recommended last February that the West concentrate on this objective in place of package disarmament plans. He was of opinion that tying a test ban "into those other parts would make agreement impossible within any conceivable range of years."

RISE OF PRESSURE FOR NUCLEAR TESTING BAN

Pressure for suspension of nuclear tests has been building up for a long time. The Communists have demanded outlawing of nuclear weapons testing, production, and use periodically since World War II. Recently the neutralist nations, motivated by fears of radioactive fallout² and by fears that nuclear weapons would come into the possession of more and more countries, have taken the lead in urging test suspension.

Indian Prime Minister Nehru made the first important proposal for a short-term cessation of tests in April 1954. But Washington adhered to the position that suspension of tests for even a limited period would not be acceptable unless (1) international detection posts were established

² See "Radiation Hazards," *E.R.R.*, 1958 Vol. I, pp. 101-120.

within the Soviet Union; and unless (2) the ban was extended to cover production of nuclear materials. Although Moscow from time to time has appeared to recognize various requirements of an effective system for enforcing arms controls, it never has been ready to follow through and accept full international supervision of a nuclear ban, least of all a ban on production of nuclear materials.⁴

President Eisenhower and British Prime Minister Macmillan agreed at Bermuda, March 24, 1957, to register advance notice of nuclear tests with the United Nations and to conduct the tests in such a way as to minimize radiation hazards. Western insistence on a production ban, as a condition for suspension of testing, came under increasing fire after the breakdown of U.N. disarmament talks in the summer of 1957. President Eisenhower gave the first indication of a possible shift of administration policy in that regard at a news conference on March 26, 1958; he implied then that the United States might be willing to negotiate a "reliable" agreement for banning of tests without an accompanying ban on weapons production.

The Soviet Union stepped out ahead by proclaiming on March 31 that it was unilaterally halting atomic and hydrogen weapons tests. Foreign Minister Andrei Gromyko appealed to the United States and Great Britain to follow suit and warned that if they did not do so, the U.S.S.R. would feel free to resume testing. President Eisenhower called the Soviet move a "gimmick" and refused to stop scheduled commencement of American tests on April 28. On that day, however, he invited the Soviets to send experts to a conference at Geneva to explore the technical problems involved in enforcement of a test ban.

The scientists concluded that concealment of nuclear explosions was virtually impossible. They announced, at the end of their conference on Aug. 21, that tests carried out anywhere on the earth, under the surface of the earth, under water, or in the upper atmosphere could almost certainly be detected by one or more of from 170 to 180 strategically located monitoring stations. Eisenhower and Macmillan thereupon jointly proposed a conditional one-year suspension of testing to begin Oct. 31, 1958. They indicated, Aug. 22, that if the Soviet Union did not resume testing after Oct. 31; that if agreement was reached on

⁴ See "Inspection for Disarmament," *E.R.R.*, 1957 Vol. I, pp. 424-440.

Editorial Research Reports

effective machinery to police observance of the ban; and that if satisfactory progress was made on other aspects of arms control, the prohibition on nuclear tests could be extended indefinitely on a year-to-year basis.

At the same time, the President made it clear that "The suspension of testing of atomic and hydrogen weapons is not in itself a measure of disarmament or limitation of armament." He added: "An agreement in this respect is significant if it leads to other and more substantial agreements relating to limitation and reduction of fissionable material for weapons and to other essential phases of disarmament."

EAST-WEST DIFFERENCES OVER TEST SUSPENSION

Since then, East and West have been jockeying for the strongest diplomatic and propaganda positions. The Soviet Union introduced a resolution in the U.N. General Assembly, Sept. 16, calling for an immediate and permanent cessation, rather than a mere annual suspension, of tests without waiting for agreement on enforcement measures—a proposal which the Soviets are now pressing at Geneva. Gromyko declared, Oct. 27, that his country, which had begun nuclear testing again on Sept. 30, would continue testing until the number of its nuclear explosions equaled the number set off by the United States and Great Britain since March 31.⁵ A Soviet note of Oct. 1 had proposed that the Geneva meeting be held at the foreign ministers' level; when the western governments refused, Soviet Deputy Foreign Minister Valerian A. Zorin charged that the West was trying to "drown" the disarmament problem "in endless technical disputes."

Ambassador Lodge said on Oct. 15 that this country was determined "to reach an equitable and lasting agreement" on the question of nuclear tests. The U.S. Atomic Energy Commission announced, Nov. 7, that Russia had made two tests since the Geneva parley began. The President appealed to Moscow the same day to stop testing; otherwise, he implied, this country would have to resume its own testing.

France and Red China, though not represented at Geneva, have posed difficulties for the negotiators there. France is trying to develop its own nuclear weapons before the Big Three agree to a test ban and attempt to make

⁵ Officially announced tests since March 31 include 35 American, five British, and 14 Soviet explosions.

it universal. Jules Moch, head of the French delegation at the United Nations, warned on Oct. 20 that France would not be bound by a tripartite pact to stop testing unless it contained "precise clauses on cessation, under international control, of the production of fissionable materials for weapons purposes and on gradual reconversion to peaceful ends, likewise under international control, of the existing stockpiles."

Red China, although unlikely to develop the capacity to manufacture its own nuclear weapons for some time to come, must be considered in any discussion of nuclear test detection. A prohibition on nuclear testing presumably could not be made foolproof without monitoring stations on Chinese soil. Secretary of State Dulles suggested, June 11, that even if Red China was not a member of the United Nations, it could participate in a disarmament control system. But whether Peiping actually would do so is uncertain. Australia's representative at the United Nations has cautioned that a "disarmament agreement that did not impose suitable obligations upon Communist China would fall short of what is needed for security in our part of the world."

YEAR OF STALEMATE ON ARMS NEGOTIATION

Lingering hopes for a comprehensive disarmament agreement with Soviet Russia went out the window in August 1957 when Zorin, Soviet representative in the disarmament talks then going on in London under U.N. auspices, refused to discuss the West's latest proposals. On Aug. 27, the day after the Soviet Union had announced successful testing of an intercontinental ballistic missile, Zorin accused the West of "preparing for atomic war" and of using the secrecy rule of the U.N. Disarmament Commission's subcommittee "to mislead public opinion, to instill false illusions, and deceive the peoples who are vitally interested that the armaments race end and the danger of a new war with atomic weapons be removed."

The Soviet delegate assailed the subcommittee's "narrow and one-sided composition" and urged "inclusion of a greater number of states, representing different continents and different social systems, in the discussion of disarmament problems." At the session of the General Assembly a year ago, a Soviet resolution to give all U.N. members places on the Disarmament Commission was rejected, but

Editorial Research Reports

the commission was expanded to include 25 members.⁶ Russia, still unsatisfied, would have nothing further to do with the commission.

Moscow soon began to demand a summit conference on disarmament. In a letter delivered to President Eisenhower on Dec. 10, 1957, just before a NATO heads-of-government meeting in Paris, Soviet Premier Bulganin pressed earlier proposals for a ban on nuclear testing and endorsed a Polish offer to renounce use of nuclear weapons in return for similar renunciation by East and West Germany. In response to widespread western discussion of military disengagement in Europe, Soviet leaders informally proposed extension of the suggested atom-free zone to cover territory from Scandinavia south to Italy, Albania, and possibly even the Middle East.⁷

Eisenhower, replying to Bulganin on Jan. 12, expressed willingness to attend a carefully prepared summit parley but voiced doubts about the denuclearization plan to which the name of Poland's foreign minister, Adam Rapacki, had been attached. "There cannot be great significance in denuclearizing a small area," the President pointed out, "when, as you say, 'the range of modern weapons does not know of any geographical limit' and when you defer to the indefinite future any measures to stop the production of such weapons."

Because Moscow balked at participating in genuine preparations for a summit conference and refused to consider putting controls on the production of nuclear materials, both the call for a summit conference on disarmament and for European disengagement were viewed by many observers as predominantly propaganda moves.

Another proposal was put forward by the United States last April after Soviet Russia had denounced American bomber flights beyond the Arctic Circle. Lodge called on the United Nations to study establishment of an international inspection zone in the Arctic to guard against surprise attacks by U.S. or Soviet planes or missiles. The plan, first offered in 1957 as part of the over-all western

⁶ The U.N. Disarmament Commission had been composed of the 11 members of the Security Council plus Canada; the subcommittee consisted of the United States, Britain, Canada, France, and the Soviet Union.

⁷ See "Military Disengagement," *E.R.R.*, 1958 Vol. I, pp. 141-160. The Soviet proposals appeared timed to counter offers by the United States at the NATO conference to provide its allies with missiles capable of carrying nuclear warheads.

disarmament program, was welcomed by Secretary General Hammarskjöld as "a fruitful initiative." But the Soviet Union vetoed the pertinent resolution in the Security Council on May 2.

PROBING OF PROBLEM OF OUTER SPACE CONTROL

A new dimension was added to the disarmament problem a year ago by Soviet missile tests and satellite launchings. As early as January 1957 the United States had proposed that prompt steps be taken to assure "that future development in outer space could be devoted exclusively to peaceful and scientific purposes." Organization of a study committee to work out an international inspection system to guarantee attainment of this objective was part of the comprehensive western plan for disarmament rejected by the Soviet Union in August 1957.

American officials have put great emphasis on the need to set up international control of outer space before any nation can accumulate enough missiles or other weapons to nullify international surveillance. President Eisenhower nearly a year ago listed outer space first among disarmament problems to be discussed at a summit conference. In his note to Bulganin last January, the President asked an end to production and testing of weapons "which would use, or more accurately misuse, outer space."

The Soviet Union made formal proposals for control of space on March 15. The chief feature of the Russian statement was an attempt to link space controls with abandonment of the foreign bases from which, Moscow asserted, the United States could attack Russia with bombers and short-range missiles that did not need to enter outer space. According to the Kremlin:

One cannot fail to see that in raising the question of banning the use of cosmic space for military purposes, the United States is making an attempt, through a ban of the intercontinental ballistic rocket, to ward off a retaliatory nuclear blow through cosmic space while maintaining its numerous military bases on foreign territories, intended for attacking the Soviet Union and the peaceable states friendly to it with the use of nuclear weapons.

The State Department immediately rejected the Soviet conditions as "completely unacceptable." Secretary Dulles asserted, Mar. 18, that Moscow in linking control of space with abandonment of foreign bases, had "mixed up two things that are quite unrelated."

Postwar Negotiations on Arms Control

DISARMAMENT PROPOSALS, limited or comprehensive, short-term or long-term, have been the subject of negotiation for twelve years. The course of the negotiations can be divided into four periods. For the first few years after World War II, attention was focused primarily on American proposals for international control of atomic energy. After the Soviet Union had rejected enforcement by international inspection, East-West relations deteriorated to the point where, during the period of the Berlin blockade and the Korean war, discussion of disarmament appeared futile. From 1952 to 1955 hopes for agreement revived with projection of European plans for reduction of conventional forces. Since 1955, rapid technological advances have shifted the emphasis toward the danger of surprise attack by bombers or missiles. Despite the variety of approaches, agreement never has been reached on any far-reaching plan for internationally supervised disarmament.

INITIAL CONCENTRATION ON ATOMIC WEAPONS

The United States took the lead in separating atomic from conventional weapons by advancing a radical plan for international control of atomic energy. At the first meeting of the U.N. Atomic Energy Commission in June 1946, the American delegation, headed by Bernard M. Baruch, put forward the plan which became known by his name. It proposed establishment of an international atomic energy monopoly. The agency to be created for that purpose was to own, control, and license all atomic energy facilities, enjoy exclusive power to develop atomic energy for both military and peaceful purposes, and conduct continuous inspections to see that no one else carried on clandestine operations.

Although the Baruch plan won General Assembly endorsement, it was not acceptable to Moscow, which viewed the proposal as trespassing on national sovereignty. The Soviet Union, which then had no atomic weapons, demanded that they be completely outlawed and that all existing supplies be immediately destroyed. Periodic inspection was agreed to but application of controls was to be subject to the veto power. Because the United States, Great Britain, and Canada insisted on effective international control of

atomic energy, which could not be attained with certainty under the veto power, the U.N. Atomic Energy Commission was deadlocked.

The task of controlling and limiting non-atomic weapons was consigned in February 1947 to a U.N. Commission for Conventional Weapons. The western powers held in general, then as now, that cuts in conventional armed strength must depend on settlement of outstanding political issues, such as the division of Germany and Soviet occupation of East Europe. Moscow maintained that arms reduction would in itself reduce world tension. The Kremlin in 1948 proposed that troop strength of major powers be pared by one-third, but the suggested reduction was made conditional on acceptance of a complete ban on atomic weapons. The Soviets, disagreeing with the West, insisted at that time that the question of atomic weapons was so closely related to that of conventional arms that the two questions could not be handled separately.

LINKING OF ATOMIC AND CONVENTIONAL ARMS

Soviet explosion of an atomic bomb in September 1949, followed by the Communist attack on South Korea in June 1950, put a new complexion on the disarmament problem. Western conventional forces were rapidly increased, once it was decided that atomic weapons were not to be employed in Korea. As a result, President Truman indicated in October 1950 that the United States would be willing to discuss control of atomic and conventional weapons together. The over-all U.N. Disarmament Commission, consisting of the Security Council members and Canada, was formed in 1952 to replace the separate commissions for conventional armaments and for the control of atomic energy.

Western proposals to the Disarmament Commission stressed the need for a census of all military manpower and weapons, including atomic, and for establishment of ceilings on manpower and arms output. Action along those lines was made contingent on acceptance of a truce in Korea and on international control of atomic energy. Soviet proposals in the same period appeared to show for the first time a willingness to consider international controls over atomic energy, to be instituted simultaneously with a ban on atomic weapons. However, Moscow's re-

Editorial Research Reports

luctance to explain the proposals in detail, its insistence on armed forces reductions that would perpetuate the existing Red superiority, and its use of the Disarmament Commission to air charges that U.N. forces were waging bacteriological warfare in Korea cast considerable doubt on Communist intentions.

To prevent disarmament talks from deteriorating into a propaganda sideshow, the General Assembly in November 1953 established the disarmament subcommittee, consisting of Britain, Canada, France, the Soviet Union, and the United States, to negotiate in private. The United States continued to press for international control of atomic energy. Regulation was considered particularly important after hydrogen bombs were exploded by this country in 1952 and by the Soviet Union the following year. The Kremlin still was not satisfied with anything less than complete abolition of nuclear weapons.

An Anglo-French proposal in June 1954 sought to open a middle way to agreement by calling for a phased disarmament program in which establishment of an international control organization would be followed in turn by manpower, armaments, and military budget cuts and finally by prohibition of nuclear weapons. The plan was approved in principle by the United States and accepted by Russia in 1955 as a basis for negotiation.⁸

PLANS FOR GUARDING AGAINST SURPRISE ATTACK

Disarmament policies of both East and West were soon to undergo thorough reappraisal. Peaceful coexistence became the Kremlin's slogan. New Soviet proposals, put before the disarmament subcommittee on May 10, 1955, reflected a Russian desire for relaxation of military tension by offering guarantees of protection against surprise nuclear attack. "It is well known," the Soviet Union pointed out, "that the production of atomic energy for peaceful purposes can be used for the accumulation of stocks of explosive atomic materials." In the absence of any known method of detecting hidden nuclear weapons stockpiles, the Kremlin pointed out that "a formal agreement on international control" would not eliminate "possibilities beyond the reach of international control for evading this control and for organizing the clandestine manufacture of atomic and hydrogen weapons."

⁸ See "Controlled Disarmament," *E.R.R.*, 1955 Vol. II, pp. 459-476.

Arms Control: 1958

Technological development had proceeded so rapidly, Moscow noted, that the most effective method of arms control was not an imperfect census and reduction of existing weapons supplies, but an international inspection system to guard against surprise attack. It proposed setting up control posts at "important communications centers, ports and airfields" to ensure that "no dangerous concentrations" of military forces took place. At the same time, the Soviets accepted the western view that a ban on atomic weapons should go into force only after an international control authority had been established.⁹ The western powers welcomed the Soviet plan for international inspection at key points, but they regarded ground inspection alone as insufficient.

Following a complete Washington review of the disarmament problem early in 1955, Harold E. Stassen had been appointed Special Assistant to the President for Disarmament. Recognition by the United States of the importance of protection against surprise attack followed. President Eisenhower observed at the Geneva summit conference in July 1955 that a surprise nuclear attack could be destructive "far beyond anything which man has yet known." He proposed that the United States and the Soviet Union make available complete facilities for mutual aerial reconnaissance and exchange blueprints of each other's military establishments. The so-called "open skies" plan was advanced as a measure to build international confidence before proceeding to actual disarmament. Soviet Premier Bulganin rejected it on the grounds that it did not include American bases abroad and did not provide for a reduction in world armaments.

Britain and France also put forward proposals at the summit conference. British Prime Minister Eden suggested a joint inspection of armed forces within a European zone on both sides of the Iron Curtain as a means of trying out the procedures of international inspection. French Premier Faure proposed restrictions on military expenditures and diversion of the resultant savings to an international fund for economic development.

Although no disarmament agreement issued from the

⁹ U.S. Senate Subcommittee on Disarmament, *Disarmament and Security: a Collection of Documents, 1919-1955* (1956), pp. 389-391.

Editorial Research Reports

summit conference or the foreign ministers' conference that followed three months later, Eisenhower's open skies plan and Bulganin's key points inspection plan were considered by the U.N. disarmament subcommittee in the spring of 1956. Great Britain and France then proposed a combination of the two plans with a freeze on armaments. Stassen agreed in principle and on March 21, 1956, suggested preliminary establishment of trial inspection areas and exchange of technical missions to study methods of supervision. Additional American proposals called for a first-step reduction of U.S. troop strength to 2.5 million men, for advance notification of troop movements, for termination of nuclear weapons production under international inspection, and for an ultimate ban on nuclear testing.

The U.S.S.R., reversing its decade-long policy, suggested on March 27, 1956, that greater progress might be made if discussion was limited to conventional arms. The Soviet timetable called for reduction of Soviet, American, and Chinese forces to levels of between 1 and 1.5 million men, of British and French forces to 650,000, and of the forces of other states to between 150,000 and 200,000. For the first time, Moscow agreed that the control organization should be in working order before the reductions were begun.

The main differences between East and West at the end of 1956 related to the timing of various aspects of disarmament and control. The Soviets refused to accept air reconnaissance in the first stage, as the West demanded. Moreover, the Kremlin insisted that, once a comprehensive disarmament plan had been agreed upon, the various steps by which it was to be carried out should follow automatically according to schedule. The western governments, on the other hand, maintained that each transition to a more advanced stage should depend on satisfactory performance of previous obligations.

INABILITY TO AGREE ON AERIAL INSPECTION ZONES

Negotiations at the 1957 meetings of the disarmament subcommittee, held in London from March to September, centered on the problem of insurance against surprise attack through establishment of limited inspection zones.¹⁰

¹⁰ The Soviet Union in November 1956 had proposed a limited inspection zone to extend about 500 miles on either side of the Oder-Neisse line dividing East and West Germany.

The United States tentatively proposed a European and a Pacific inspection zone. The suggested European zone, triangular in shape with its apex at the North Pole, was to include the Scandinavian countries and territory as far west as the Low Countries and eastern France, as far south as northern Italy and northern Yugoslavia, and as far east as a line in the Soviet Union running close to Leningrad. The Pacific zone, also triangular, was to include the whole of Alaska and an equally large portion of Siberia.

The Soviet Union suggested a European zone extending farther to the west and south to include a part of Great Britain, most of France and Italy, and all of Yugoslavia but none of Scandinavia, and only a small part of the Soviet Union. Soviet negotiators also proposed a much larger western zone that would cover all of the United States west of the Mississippi River and about half of Soviet Asia.

The Soviet-proposed zones were rejected by the West because they appeared to equate heavily industrialized areas in this country and in Europe with Siberian wasteland or Communist satellite territory. American officials nevertheless were gratified at Soviet willingness to consider application of aerial inspection on such an extensive scale.

To quiet European and especially German fears that the United States might agree to inspection zones not approved by the European nations involved, Secretary Dulles flew to London in August 1957 to consult with representatives of the NATO states. The result was a NATO-endorsed plan for inspection zones to include either:

- (1) All of the territory of the continental United States, including Alaska; the Aleutian Islands; all of Canada; and all of the territory of the U.S.S.R.; or
- (2) All of the area north of the Arctic Circle, plus the whole of Alaska and the Aleutians; all Soviet territory east of Long. 160° E. and west of Lat. 50° N., including the Kamchatka Peninsula and the Kurile Islands.

If the Soviet Union accepted either of these zones, then another zone also would be set up to include all of Europe with the exception of the southern half of Portugal and Spain, the southern tip of Italy, and most of Greece and Turkey.

Editorial Research Reports

The inspection zones formed part of an over-all western disarmament "package" proposed by Stassen in the disarmament subcommittee on Aug. 26. The plan called for:

- (1) Cessation of production of fissionable materials for weapons purposes, under international inspection.
- (2) Cessation of nuclear weapons testing, under effective international control.
- (3) Reduction of existing nuclear stockpiles.
- (4) Reduction of existing manpower and armaments levels.
- (5) Ban on use of nuclear weapons except in self-defense.
- (6) Study of measures for peaceful control of outer space.
- (7) Study of possible regulation of weapons imports and exports.
- (8) Establishment of an international control authority.
- (9) Reservation of the right of each nation to announce a suspension of obligations in the event of violations by other parties endangering the first nation's security.

In order to satisfy the NATO countries, application of each of the propositions was to depend on acceptance of all of the others. It was pointed out at the time that the indivisibility of the package plan . . .

applied especially to the moratorium on tests, which the French absolutely refused to accept as long as Britain, the Soviet Union, and the United States were building up their stockpiles of weapon fuel, and as long as Germany might be in danger of doing so. Germany insisted that the "cut-off" [in nuclear production] should be a condition for aerial inspection, in the belief, one suspects, that this condition protected them from danger of Russian acceptance.¹¹

Refusal of the Soviet Union to discuss this comprehensive program, and its subsequent boycotting of the U.N. Disarmament Commission, put the problem of disarmament once more in the lap of the General Assembly.

¹¹ William R. Frye, "Disarmament Comes Back to the General Assembly," *Bulletin of the Atomic Scientists*, November 1957, pp. 333-334.

Technical Advances and Arms Control

THE SLOW PACE of disarmament negotiations over the last decade contrasts sharply with the rapid development of military technology. To some extent, technological improvements have made possible more thorough inspection. Military men, for example, see in the sputnik a new opportunity for aerial reconnaissance that may not require Soviet agreement—at least not until the legal status of outer space is clarified.¹² Current progress toward a ban on nuclear testing stems directly from progress in detection techniques. Without a reliable detection system, a western commitment against nuclear testing would be much less likely.

GROWING COMPLEXITY OF CONTROL BY INSPECTION

By and large, however, technological advances have made the disarmament problem more rather than less complex. Western proposals for elimination of nuclear weapons had to be set aside as obsolete in 1955, because by then such a large number of nuclear weapons had been manufactured that no inspection system could be depended upon to account for all past production and detect secreted weapons.

The same problem now has been raised with new urgency in connection with launching of satellites and missiles into outer space. Both the United States and the Soviet Union seem to be working toward an ultimate defense based on long-range missiles instead of bombers. Recently suggested plans to guard against surprise attack will have to be revised as missile launching pads, which can be concealed in a variety of ways, replace airfields as bases for offensive or defensive action. "How is this danger [of surprise nuclear attack] to be removed," it has been asked, "once the Soviet Union has planted ballistic missile launching platforms in the forests and wastes of northern Siberia? Aerial cameras perform near miracles, but could they detect such platforms, adequately camouflaged and/or buried beneath the surface?"¹³

¹² See "Control of Outer Space," *E.R.R.*, 1958 Vol. I, pp. 123-139.

¹³ William R. Frye, "Disarmament Comes Back to the General Assembly," *Bulletin of the Atomic Scientists*, November 1957, p. 335.

Editorial Research Reports

In the light of such developments, American emphasis on aerial inspection for protection against surprise attack may have to be reconsidered. At the same time, because solid fuel missiles will require little advance preparation for firing and a maximum flight time of only half an hour for intercontinental range, the Soviet-proposed system of ground inspection at key points would appear too slow and cumbersome to be of much use. Thus a whole new frame of reference for disarmament presumably will be required when not only nuclear weapons but also their delivery systems may lie beyond the bounds of effective international control.

STRESS ON NOW-OR-NEVER VIEW OF ARMS CONTROL

The alarming consequences of technological progress in nuclear weapons and missile development constitute a major argument for bringing arms under control without further delay. The time is rapidly approaching, according to a study by the National Planning Association, when nuclear weapons will be compact enough to fit into a suitcase and numerous enough to fall into the hands of organized insurrectionary or criminal groups.¹⁴

Already, it has been pointed out, mechanical devices for waging war are so refined that catastrophe could be precipitated by a small degree of human error or by the deliberate action of a very small number of men. A mistaken reading of a radar screen in northern Canada could, the Russians charged last April, send squadrons of American bombers over the Arctic Circle toward the Soviet Union and, failing prompt correction, bring on a retaliatory Russian attack. An unbalanced individual might succeed in releasing nuclear weapons single-handed, as Moscow insisted last July when the Soviet embassy in London was anonymously informed of a scheme to drop a nuclear bomb off the British coast to demonstrate "just how horrible an atomic war could be." Complex safeguards have been erected against such eventualities, but the danger of accidental or irrational action cannot be entirely ruled out.

An effective system of controlled disarmament, some persons contend, would not only lessen the chances for nuclear holocaust but also ease world tensions. A part of the funds spent on arms could be devoted to bettering

¹⁴ National Planning Association, *1970 Without Arms Control* (1968), pp. 28, 45.

social conditions in the countries now heavily armed and to helping underdeveloped countries. Improved relations among nations resulting from termination of the arms race might be expected to promote settlement of other controversial issues.

RISKS IN BAN ON NUCLEAR TESTS AND NUCLEAR ARMS

Few persons have voiced outright opposition to arms controls, but many western leaders have been skeptical of the possibility of reaching agreement with the Soviet Union on an effective control system. In an article in *Life*, Dec. 23, 1957, Secretary Dulles wrote:

Our experience, which merely confirms that of others, demonstrates that the governments dominated by international Communism practice Lenin's dictum, "Promises are like piecrust, made to be broken. . . ." We cannot rely on a worldwide "armistice" agreement *except as we can enforce it*. If the terms of such an agreement diminish our will or capacity to stop international Communism or increase the assets which it could use against us, then it increases our peril. Surely, we should not seriously weaken our position in reliance of [sic] new promises of the Soviet Union while it is gravely in default on its present promises.

The opinion of the experts at Geneva that a ban on nuclear testing could be enforced weighed heavily in the administration's decision to press for a suspension agreement.¹⁵ But a number of American officials and military experts question the wisdom of moving along these lines merely in response to technological and propaganda pressures and with little regard for the national military posture. Henry A. Kissinger, associate director of the Harvard Center for International Affairs and director of the Special Studies Project of the Rockefeller Brothers Fund, has asserted that the free world should have "no illusions about the implications of a complete ban on nuclear tests." He pointed out recently: "If a cessation of nuclear testing is a 'first step' to anything, it is to an increased campaign to outlaw nuclear weapons altogether. If these weapons are too dangerous to test, so the argument will go, they are surely too terrible to use."¹⁶

At present, however, the free world is heavily dependent

¹⁵ Influential figures, including former Chairman Lewis L. Strauss of the Atomic Energy Commission and nuclear scientist Edward Teller, had previously advised against suspension of tests on the ground that it was not possible to detect nuclear explosions under all circumstances.

¹⁶ Henry A. Kissinger, "Nuclear Testing and the Problem of Peace," *Foreign Affairs*, October 1958, p. 8.

Editorial Research Reports

on nuclear weapons to balance Soviet preponderance in manpower. Gen. Nathan F. Twining, chairman of the Joint Chiefs of Staff, stressed the importance of nuclear weapons in American strategy in a speech on Oct. 21:

Our national policy calls for the use of nuclear weapons in any case where such use would be advantageous to us. . . . We will fight an enemy, if we are forced into a war, on our terms and not his. This means we will not attempt to meet his masses of soldiers with masses of our own. We will meet him with superior weapons, equipment, techniques, and tactics.

In Kissinger's words, banning of nuclear weapons, or action that might lead to a ban, is "tantamount to unilateral disarmament."¹⁷

Continued testing is advocated to promote development of "clean" nuclear weapons, with reduced radioactive fallout, for tactical and anti-missile use. Edward Teller, often called the father of the hydrogen bomb, said last winter that "Further tests will put us in a position to fight our opponents' war machine while sparing the innocent bystanders." Development of clean weapons, he added, would "reduce unnecessary casualties on the battlefield" and make it possible to shoot down "high-flying attacking planes without endangering the life of anyone below."¹⁸

Some observers foresee deterioration of American nuclear research if testing is discontinued. Scientists in the United States, it is feared, will go into other fields. Then if some country should violate the test ban in order to perfect improved weapons, the United States would be handicapped in trying to re-establish research and testing installations.

The task of concluding a protective and effective disarmament agreement with the Soviet Union is many-sided and complex. The negotiators, while sharing world hopes for arms control, must be wary of gambling with the security of the free world. Secretary Dulles said on Oct. 29: "It is hard to be optimistic about these matters. . . . I would say that in these forthcoming talks, both in relation to the suspension of testing and protection against surprise attack, we are animated more by hope than by expectation."

¹⁷ *Ibid.*, p. 8. See also "Limited War," *E.R.R.*, 1958 Vol. II, pp. 551-557.

¹⁸ Edward Teller, "Alternatives for Security," *Foreign Affairs*, January 1958, p. 204.

